PIOB-01299

MULTI-CD CONTROL FM/MW/LW TUNER DECK AMPLIFIER

AMPLIFICATEUR PLATINE DE SYNTONISATION FM/PO/GO DE COMMANDE MULTI-CD

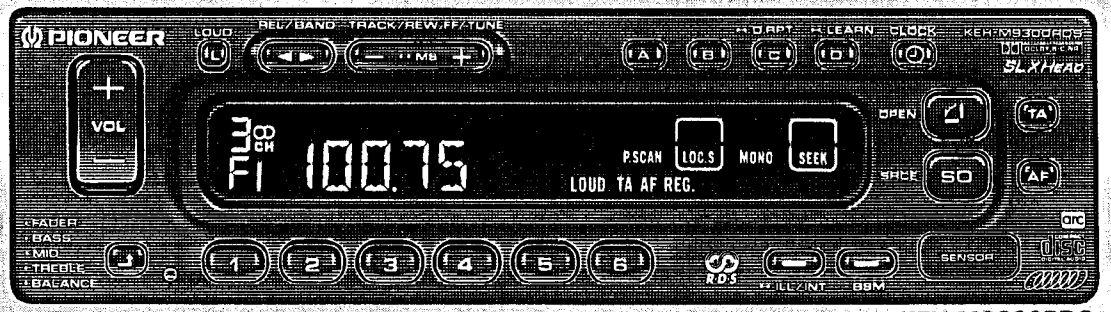
OWNER'S MANUAL
MODE D'EMPLOI

Thank you for purchasing this PIONEER product. Before attempting operation, be sure to read this manual.

Nous vous remercions d'avoir acheté cet appareil PIONEER. Avant de l'utiliser, prendre soin de lire ce manuel.

Vielen Dank für den Kauf dieses PIONEER Produkts. Diese Bedienungsanleitung vor der Inbetriebnahme sorgfältig durchlesen.

Muchas gracias por la adquisición de este producto PIONEER. Antes de tratar de operarlo, lea atentamente este manual.



KEH-M9300RDS

PIONEER®

The Art of Entertainment

KEH-M9300RDS

KEH-M9300RDS

Features

• **Electronic Tuner**
Frequency allocation differs depending upon the area. This unit has been designed in accordance with the frequency allocations for Western Europe, Asia, the Middle and Near East, Africa, Australia and Oceania. Use in other areas may result in improper reception of AM. The RDS function does not work in the areas where RDS broadcast services are unavailable.

Note:
- The attached "Pioneer CarStereo-Pass" is used only in West Germany.

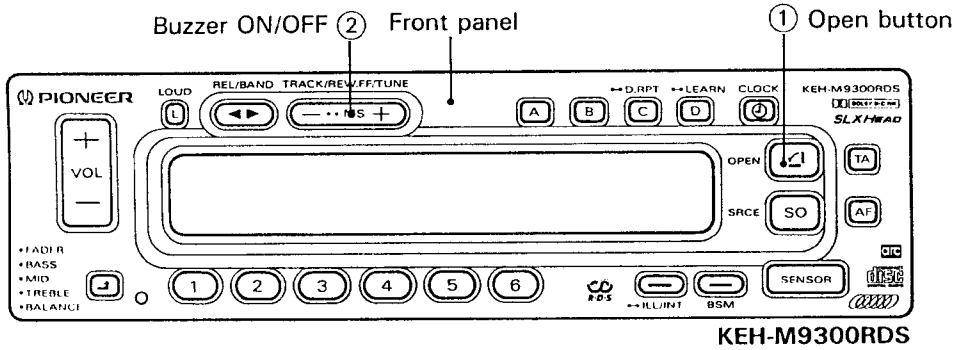
- Multi CD Control function for full control over optional magazine type multi-play CD player.
- RDS system provides automatic Alternative Frequency reception, Network/station name display, and traffic information reception.
- Built-in highly sensitive "Automatic Reception Control" (ARC) for automatic control of stereo separation, muting, and frequency characteristics to match the strength of the FM signal.
- Versatile tuning system (preset, preset scan, seek, manual).
- Logic design cassette deck for light-touch easy controls.
- Built-in Dolby B and C NR for reduced tape hiss.
  (This feature is provided for the KEH-M9300RDS.)
- Removable front panel protects against theft.
- The front panel illumination colour can be switched between green and amber instantly (Dual illumination).
- 4 × 25 W high power. Offers choice of different speaker systems; 2-, 4-, or 6-speaker system (with an optional power amplifier).
- Dolby noise reduction manufactured under license from Dolby Laboratories Licensing Corporation.
  "DOLBY" and the double-D symbol ⊡⊡ are trademarks of Dolby Laboratories Licensing Corporation.

Using the Removable Front Panel

The front panel of this unit can be removed to prevent theft.
Also, to prevent forgetting to remove the front panel, 5 seconds after the ignition is turned off, if the front panel is still attached, a buzzer will sound for a few seconds.
If you wish to cancel the sound of the buzzer, please do as follows. Keep the minus side (−) of button ② depressed and turn the vehicle's ignition key from OFF to ON. By repeating this procedure, the sound of the buzzer will be restored.

Detaching the Front Panel

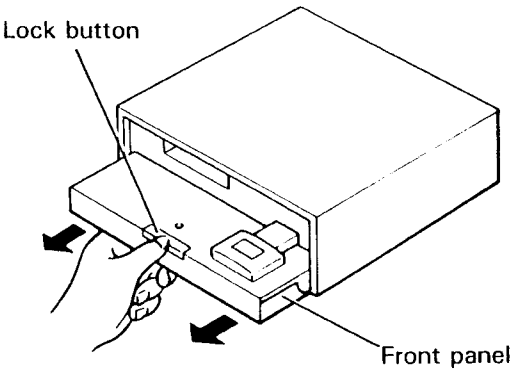
1. Press button ① to open the front panel.



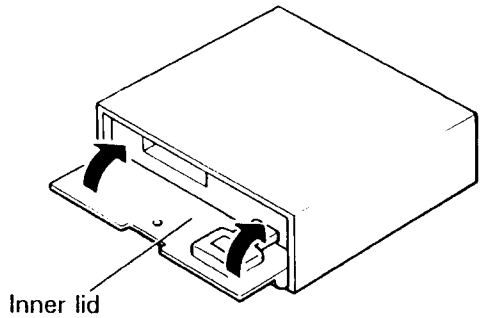
KEH-M9300RDS

- The button ① may only be used when the ignition key is turned on, or within 30 seconds after turning the ignition off. If more than 30 seconds have passed since the ignition was turned off, button ① will not open the front panel.

2. While holding down the lock button, pull the front panel toward you.
- Take care not to put pressure on the display or drop the front panel.

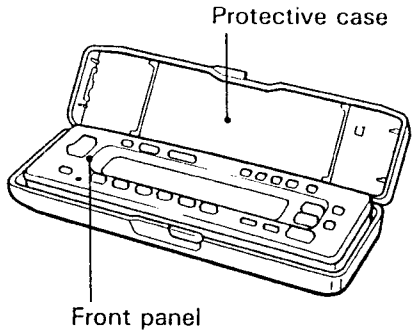


3. Close the inner lid.



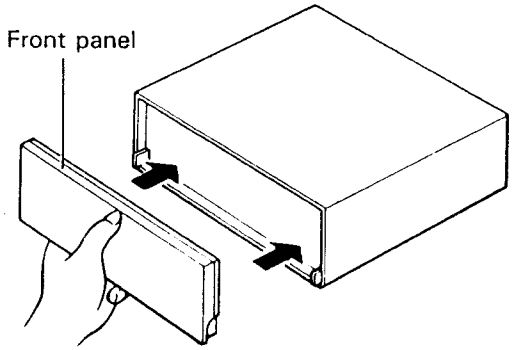
- Always keep the inner lid closed while the front panel is out, otherwise dirt or dust may get into from the cassette slot, causing malfunctions.

4. Enclose for safekeeping the front panel that is removed in the supplied protective case.



Replacing the Front Panel

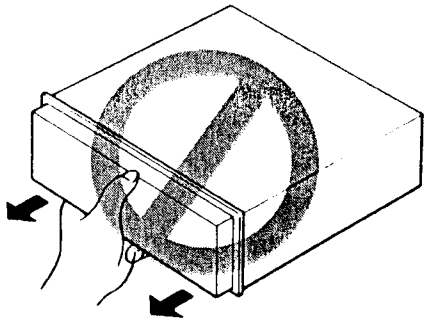
1. Make sure the inner lid is closed.
2. Push the front panel into the main body.



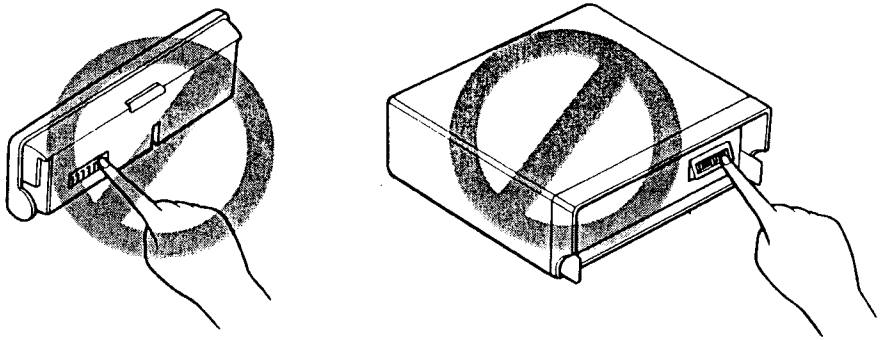
- When replacing the front panel, do not put pressure on the display or control buttons.
- If the front panel is not installed correctly, it may not be opened when the open button is pressed or no operation may occur when an operation button is pressed. In this case, push down the front panel slightly.

Precautions

- Do not force the front panel to remove it.



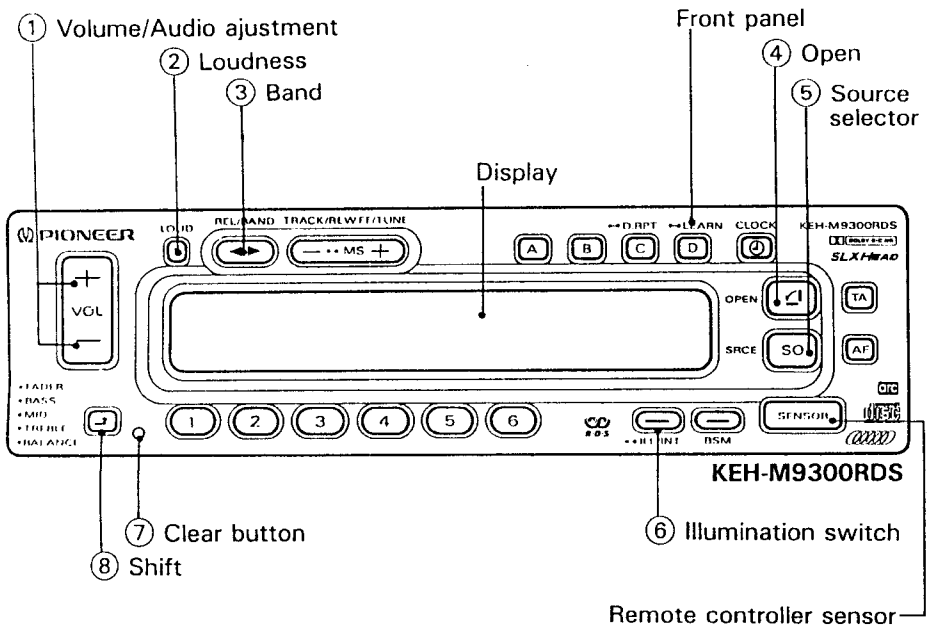
- Do not touch the contacts on the front panel or on the unit body, since this may result in poor electrical contact. If dirt or other foreign substances get on the contacts, wipe them with a clean, dry cloth.

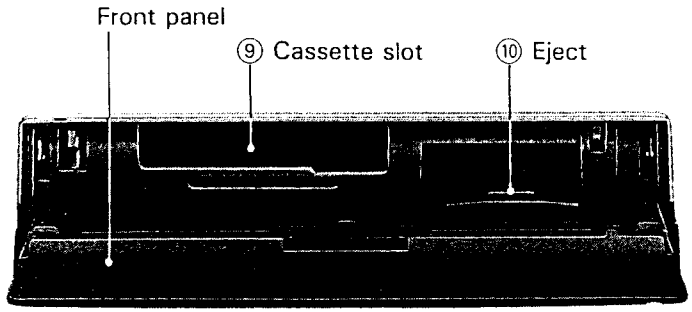


Precautions When Handling the Front Panel

- Do not leave the front panel in any area exposed to high temperatures or direct sunlight.
- Do not drop the front panel or otherwise subject it to strong impact.
- Do not allow such volatile agents as benzene, thinner, or insecticides to come into contact with the surface of the front panel.
- Never try to disassemble the front panel.

Adjusting Volume and Tone





Using the Clear Button

Once all wiring is complete, press button ⑦ with a thin, pointed object. Though not a normal occurrence, the microprocessor which controls the operation of this unit can be affected by electrostatic noise. This generally is indicated by such symptoms as no power being supplied when you switch the unit on, failure of buttons and controls, or an abnormal display. Should this happen, press button ⑦ with a thin, pointed object to reset the microprocessor. Note that doing so also resets all audio controls, so you will have to make any desired settings again. This operation deletes all memory contents, such as frequencies stored in the preset memory, so you will have to make any desired settings again.

Switching Power On

Tuner

Press button ⑤ to switch the tuner power on. Press button ⑤ again to switch the power off.

Tape

Press button ④ to open the front panel, and load a cassette in through cassette slot ⑨. The cassette will play. To eject the cassette, press button ④ to open the front panel and press button ⑩.

Note:

- None of the operation buttons except button ⑩ work while the front panel is open. Use the control buttons after shutting the front panel.
- During operation, the power to this unit is turned off if the engine is started or if the ignition is turned off then to ACC or ON again while the front panel is open. In this case, close the front panel to resume operation.

Source Selector

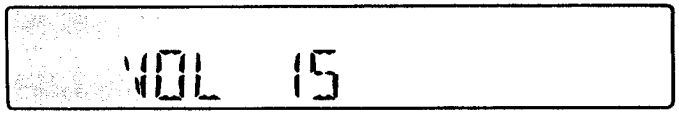
When a cassette is loaded and button ⑤ is pressed, the source shifts in the order tape → tuner → power off. If this unit is combined with a multi-play CD player sold separately such as CDX-M50, the source shifts in the order multi-play CD player → tape → tuner → power off.

Adjusting Audio

Press button ① to adjust the volume. Each press of button ⑧ changes the display and the function of button ① as follows:
Volume → Fader → Bass → Middle → Treble → Balance

Adjusting Volume

Pressing the (+) side of button ① increases the volume, while the (−) side decreases it.



Adjusting the Fader

This function controls the balance between the front and rear speakers of a 4-speaker system. Pressing the (+) side of button ① shifts the balance to the front speakers, while the (−) side shifts it to the rear speakers.

For 2-speaker systems, set FAD. 0.
(In the case of a 4-speaker system the fader ajusts the balance between the front and rear pairs of speakers.) In the case of a 6-speaker system (4 speakers connected to this unit and 2 speakers connected to an external power amplifier connected to Preout), the front-rear balance is between the 2 front speakers and the rest.

Adjusting Bass

Pressing the (+) side of button ① increases bass, while the (−) side decreases bass.

Adjusting Middle

Pressing the (+) side of button ① increases middle, while the (−) side decreases middle.

Adjusting Treble

Pressing the (+) side of button ① increases treble, while the (−) side decreases treble.

Adjusting Balance

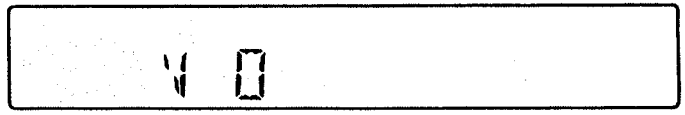
Pressing (+) side of button ① shifts the balance to the left speaker, while the (−) side shifts it to the right speaker.

- When you're adjusting fader, bass, middle, treble, or balance settings, the indicator will stop at the center setting. About 5 seconds after adjustment has been made, the display returns to its previous state.

Using Source Level Adjuster

You may wish to adjust volume when you have changed the source to radio, tape, or CD or when you have changed the radio band from FM to MW/LW. You can do so on the basis of the volume of FM as follows:

1. Use the button ⑤ to change the source. (In case of radio, change the band to MW/LW.)
2. Hold down the button ⑧ for about 2 seconds, and the display will show you the volume of the source.

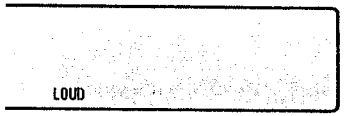


3. To increase the volume, press the (+) side of the button ①, and to decrease press the (−) side. You can adjust the volume within a span of V−4 and V+4. The display automatically returns to the previous showing when five seconds have elapsed after the adjustment.

- No adjustment can be made when an FM station is tuned in.

Using the Loudness Function

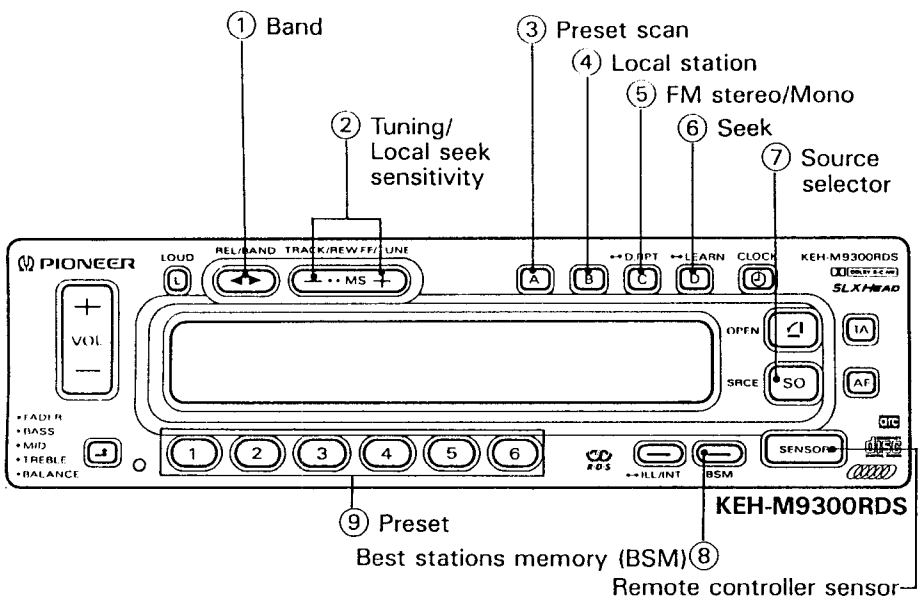
Press button ② and the LOUD indicator will appear on the display. This "loudness" function enhances both the high and low ranges of sound to give even more power to output even at low volumes.

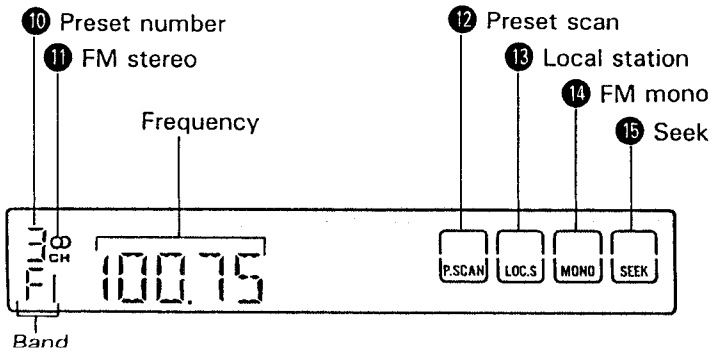


Switching Illumination Colour

Pressing button ⑥ for more than 2 seconds causes the illumination color to switch between green and amber. Pressing clear button ⑦ causes the illumination to be turned amber.

Using the Tuner





1 Turn on the tuner's power by pressing button ⑦. Each time the button is pushed the main unit switches between tuner and power off modes.

- Operation of this equipment differs if there is a cassette tape inserted in the unit or a separately sold multi-play CD player is connected to the unit. For details, see the section on "Source Selector" on page 6.

2 Press Button ① to select a band.

FI → FII → FIII → M/L
(FM1) (FM2) (FM3) (MW/LW)

Use button ② to switch between MW (531 – 1,602 kHz) and LW (153 – 281 kHz).

3 Use seek tuning to tune in a frequency.
Confirm that the seek frame ⓯ on the display is illuminated. If it is not, press button ⑥ to light it. Press button ② to either the (+) or (–) sides. The tuner will automatically tune in the next higher frequency if the (+) side was pushed, or the next lower frequency if the (–) side was pushed.

4 Adjust volume and tone (see page 6.)

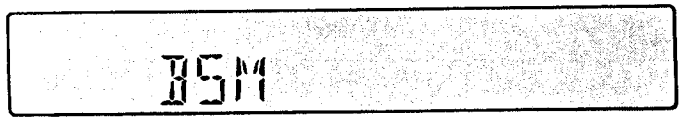
5 Assign the tuned frequency to one of the Buttons in Bank ⑨ (preset memory).
Press and hold down one of the buttons in Bank ⑨ for at least two seconds. The frequency is assigned to the selected button when the preset number ⓾ stops flashing on the display. Up to 18 FM stations (6 each for FM1, FM2 and FM3), and six MW/LW stations can be assigned to the preset memory buttons in Bank ⑨.

6 Once a frequency is assigned to a Button in Bank ⑨, you just need to press that Button to tune it in.
This also causes the number of the button pressed to appear at Position ⓾ on the display.

BSM (Best Stations Memory)

This function automatically locates stronger stations and automatically assigns their frequencies to the buttons in Bank ⑨, from strongest to weakest. It comes in handy when trying to find local stations while driving.

1. Press button ① and select a band.
2. Hold down button ⑧. After about two seconds, a "beep" will sound to signal that the BSM search has started. At this time, "BSM" will flash on the display.



3. The frequency display will return once BSM search is complete, and frequencies are assigned to buttons 1 through 6 in Bank ⑨.

- At the end of the BSM search, the displayed frequency is that assigned to button [1] of Bank ⑨.
- If there are fewer than six strong stations in the area, some of the buttons in Bank ⑨ will not be assigned frequencies, so they will retain any frequencies, assigned to them previously.
- BSM search may take as long as 30 seconds in areas where there are few strong stations.
- You can cancel BSM search by pressing button ⑧ again.

Preset Scan Tuning

This function lets you automatically monitor the stations assigned to the preset buttons.

1. Pressing button ③ turns on the frame of preset scan ⑫ and flashes preset number ⑩.
   Each station assigned to the buttons in Bank ⑨ will be automatically tuned in for about eight seconds.
2. When you hear a station that you like, press button ③ again to cancel preset scan tuning and remain at that station.

Manual Tuning

Use manual tuning when stations are too weak to be picked up by seek tuning.

1. Clear the SEEK fram ⑮ illumination by pressing button ⑥.
2. Each press of the (+) side of button ② increases the frequency in 50 kHz steps in the FM band, 9 kHz in the MW band and 1 kHz in the LW band. Pressing the (−) side of button ② decreases the frequency. Holding down either side of button ② changes the frequency at high speed.

Switching between FM Stereo and Mono

Generally, it is best to allow the ARC (Automatic Reception Control) function to automatically set the optimum listening conditions. ⓒⓓ ⑪ turns on during stereo broadcast is in reception. When there is a large amount of noise, you can press button ⑤ for clearer mono reception (The frame of FM mono ⑭ turns on).

Adjusting Seek Sensitivity

The seek tuning function of this tuner lets you select between a local setting for reception of strong stations only, and a DX (distant) setting for reception of weaker stations. The local setting also has four seek tuning sensitivity levels for FM and two levels for MW/LW to match local conditions.

Changing the Local Seek Sensitivity

1. Use button ① to select a band.
2. Hold down the button ④ for more than two seconds, and the display will show you the current local seek sensitivity for about five seconds.

(Example: LOC-2)

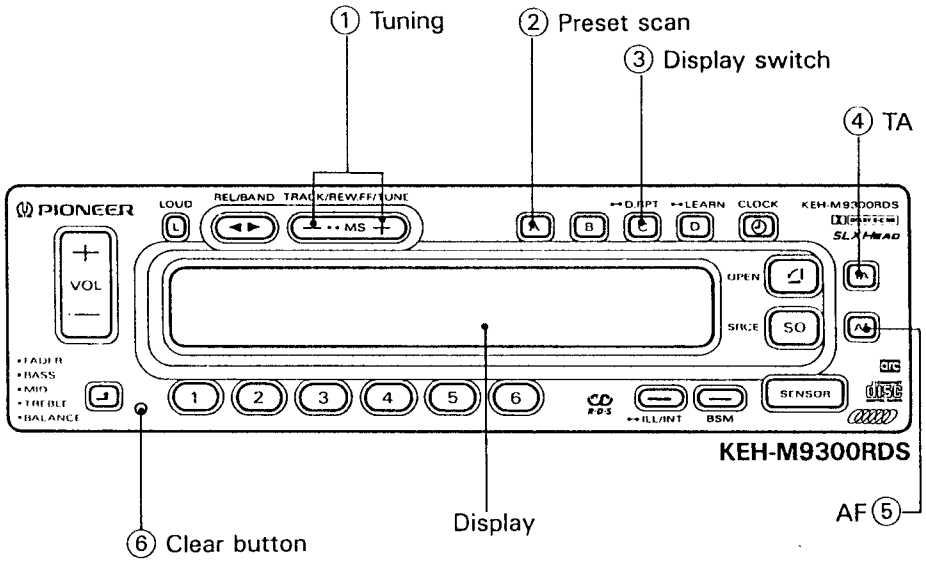
3. While the local seek sensitivity remains on the display, press the (+) side of button ② to increase the sensitivity level, and the (−) side to decrease the level as shown below.
   FM : LOC-1 ⇄ LOC-2 ⇄ LOC-3 ⇄ LOC-4
   MW/LW: LOC-1 ⇄ LOC-2
   The LOC-4 setting allows reception of only the strongest stations, while lower settings let you receive progressively weaker stations.

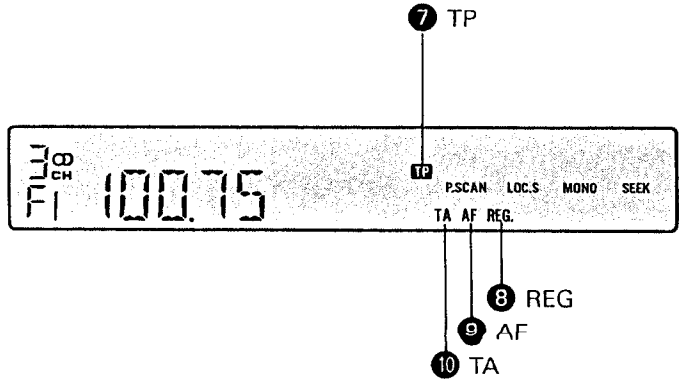
- The display of local seek sensitivity returns to the frequency when about five seconds have elapsed after the change of sensitivity.

Switching between Local and DX

Press button ④ to switch between Local and DX (distant) seek tuning. When the frame of local seek ⓭ is lit, seek tuning is performed with the local seek sensitivity. Otherwise, seek tuning is performed with the DX seek sensitivity.

Using the RDS Function





What is RDS?

The RDS (Radio Data system) is a digital information system developed by the EBU (European Broadcasting Union). Piggy-backed on normal FM broadcasts, RDS offers a variety of information services and automatic retuning functions for RDS-compatible car stereos.

RDS digital data includes various data, such as PI, PS, AF, TP, and TA.

PI ..... **Program Identification**
PS ..... **Program Service Name**
AF ..... **List of Alternative Frequencies**
TP ..... **Traffic Program**
TA ..... **Traffic Announcement**

RDS Function of This Unit

This unit has the following functions for making use of RDS data.

- Station name display using PS.
- AF (Alternative Frequency) reception, which automatically tunes into the stronger station in the network being listened to using PI and AF.
- Automatic reception of traffic information broadcasts using TP/TA.

Network/Station Name Display

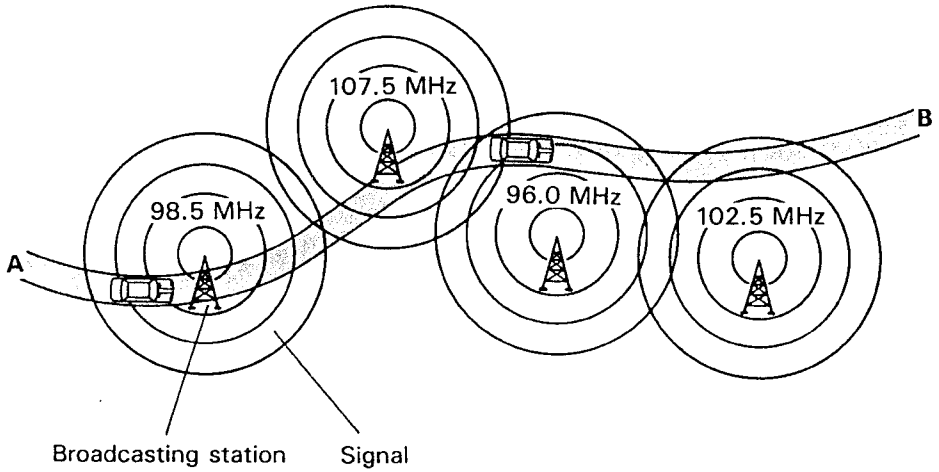
Switch the tuner on and choose one of the three FM bands.
When you tune into an RDS station with manual or seek tuning, the frequency display changes to the network/station name display after a few seconds by means of the PS code.

- The RDS functions of this unit use RDS codes transmitted along with FM broadcasts. RDS doesn't work on the MW or LW bands.
- The RDS functions may not work properly in areas where the RDS transmissions are at an experimental stage or where there are flaws in the broadcasting system.
- To display the frequency, press button ③ for about 2 seconds. The frequency is displayed for about 5 seconds.

AF (Alternative Frequency) Reception

This unit returnes to the stronger alternative transmitter in the list of alternative frequencies (AF). Thus a motorist can keep listening to the programs in the same network.

Example:
If there are following network broadcasting stations, the reception frequency automatically changes from 98.5 MHz to 107.5 MHz to 96.0 MHz to 102.5 MHz, but a motorist can keep listening to the programs in the same network while driving from point A to point B.



Alternative Frequency Reception

To select Alternative Frequency reception, press the button ⑤ (AF ❾ will appear on the display). Once tuned to an RDS network station, as long as you drive within the area or nation served by the network, the unit will automatically retune to the strongest transmitter serving the network, using the PI and AF codes, when the tuned station gets weaker.

- **If the tuned RDS station doesn't have AF (List of Alternative Frequencies) data or the unit cannot receive the AF data for some reason, the AF function will not work when the tuned RDS station's signal falls below a certain level. When this happens, AF ❾ flashes on the display, indicating that it isn't working.**
- When the button ⑤ is on, only RDS stations can be tuned in with seek or preset scan tuning.
- If BSM is activated while the AF button ⑤ is on, only RDS stations will be preset.
- Non-RDS stations such as those using the Swedish MBS system may be tuned in as RDS stations, but this is due to both systems sharing the same 57-kHz subcarrier frequency and is not a malfunction of the unit.
- If the signal from the tuned RDS station falls below a certain level and AF works, it may be that the other transmitters on the same network are found to be even weaker.
  If this is the case, AF ❾ flashes on the display, indicating that it isn't working.
- If a station frequency is held in a preset memory for FM band, the AF function will also be available to the preset station (Network memory).
- If the button ⑤ is pressed before selecting a preset station, the alternative frequency reception functions when the preset station is being recalled. Because of this, there may be a pause before the station comes on, but this is not a malfunction.
- During the day, some radio stations broadcast regional programmes which are different from those broadcasted by other stations within the same network. If the radio has pitched up a regional programme and you wish to continue listening to it, hold the button ⑤ down for more than two seconds to select the regional function. (REG ❽ will appear on the display.)
  Using the AF regional function, the radio will tune automatically to those stations broadcasting the same regional programme. However, some stations do not contain the required AF data for this function to work.

(This is not a malfunction of the unit.) Hold down the button ⑤ again for more than two seconds to cancel the regional function. (REG ❽ will go off.)

- If the radio band is set to FM beforehand, and the main unit's cassette tape or the multi play CD player is being listened to, pressing the button ⑤ will power on the radio and enter AF reception.
  However, listening to the radio is not possible.

Traffic Information Reception

When a station is selected such that TP ❼ in the display lights, traffic reports station will be received. When either TP or SK stations are tuned in, and the button ④ is pushed, traffic report waiting status will be entered, even if the cassette or the multi play CD player is on. When a traffic report begins, the unit will switch from the cassette or the CD sound to the traffic report. The traffic report volume is preset, so even if the attenuator is on, the traffic report will be heard at the same volume.

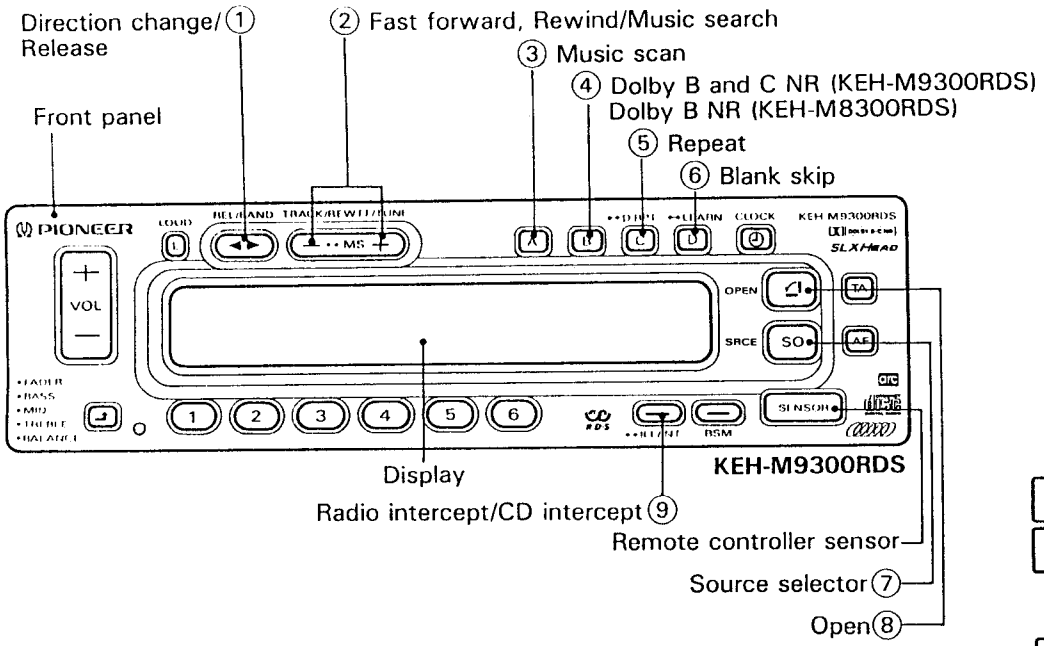
- It is possible to adjust the volume of the traffic report reception. If the volume is adjusted during the reception of a traffic report, the next time a report is received, the volume will be at the previous setting. However, if the preset volume of the traffic reception is below the normal tuning volume, the volume of the traffic reception will not decrease. And the volume at this period will be memorized as the new traffic reception volume.
- If the radio band is already set to the FM band, even when listening to the cassette or the multi play CD player, when the button ④ is pushed, the radio will be powered on, and traffic report waiting will begin. When a traffic report begins, the system will switch the sound source from the cassette or the CD to the traffic report.
- While the button ④ is on and you are listening to a cassette or CD (TA ❿ is shown on the display), the radio starts BSA (Best TP or SK Station Auto search) 10 seconds after TP ❼ disappears from the display, tune in the strongest TP or SK station, and stands by for a traffic bulletin. BSA doesn't work when AF is on, so turn the button ⑤ off when you want to use BSA.
- If button ④ is turned on (TA ❿ on the display is lit) while you are listening to the cassette or the CD, the radio will be displayed for several seconds. If button ② is pressed while the radio is displayed, the radio will begin the TIPS sequence (automatic monitoring of several TP or SK stations) and all TP or SK stations that have been preset to memory on the band that is being received will await traffic reports.
- During TIPS operation, if the signal from the TP or SK station in preset memory becomes weak and difficult to receive for 3 minutes, then BSA reception will begin automatically.
- Don't press the button ④ in an area or a country where the traffic information service is not available, as seek tuning and preset scan will not pick up any stations. An alarm sounds 30 seconds after the button ④ has been pressed, warning the driver to switch it off.
- Thirty seconds after TP ❼ disappears from the display, which occurs if the signal from the TP or SK station becomes weak, an alarm sounds for ten seconds to tell you to tune to another TP or SK station.
- If seek or preset tuning is used when the button ④ is on, only the TP or SK stations will be selected.
- If BSM is used when the button ④ is on, only TP or SK stations will be preset.

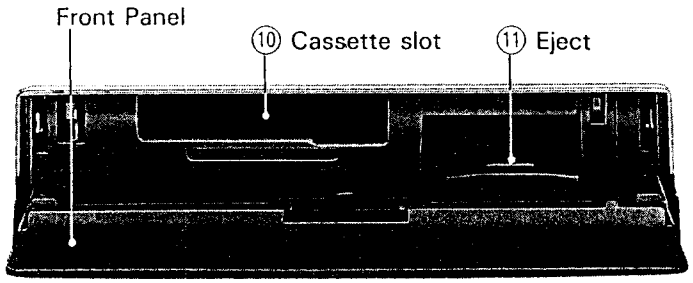
Tuning Steps

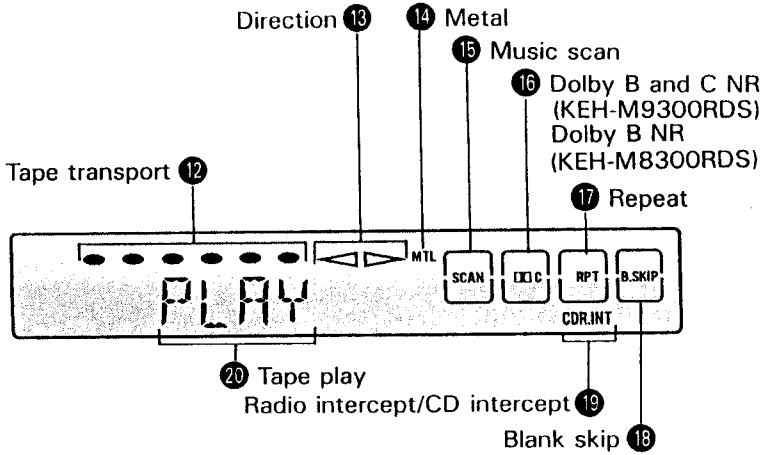
The tuning step is normally 50 kHz during seek tuning on an FM band. This tuning step changes to 100 kHz during AF reception or traffic report reception. If desired, you may set a tuning step of 50 kHz for AF reception or traffic report reception by holding down the (+) side of the button ① while turning the ignition key from OFF to ON.

- During manual tuning, the step does not change; it remains fixed at 50 kHz.
- When the batteries are changed, or when button ⑥ is pressed, the tuning step will change back to 100 kHz.
- When the AF reception function is on, only those stations being broadcast at 100 kHz steps are subject to AF reception (CENELEC STANDARD).

Using the Tape Deck







1 Press button ⑧ to open the front panel.

2 Load a cassette in through the cassette slot ⑩. The cassette will play.
Tape play ⑳, tape transport ⑫, and direction ⑬ appear.

3 Close the front panel and adjust volume and tone (see page 6).

4 To stop play halfway, press button ⑦ to switch the function off. To restart play, press button ⑦ some times until PLAY ⑳ appears on the display. The tape begins playing at the position where it stopped.

5 To eject the cassette, press button ⑧ to open the front panel and press button ⑪.

Note:

- The power is not switched on even if a cassette is loaded in through cassette slot ⑩, if the engine is started or if the ignition is turned off then to ACC or ON again while the front panel is open. In this case, close the front panel to switch the power on and start play.

- Power is automatically turned off when the cassette tape has not been set within a few seconds. When this happens, remove the tape by pressing the button ⑪ because of a possible trouble with the tape.
- A loose or warped label on a cassette tape may interfere with the eject mechanism of the unit or cause the cassette to become jammed in the unit. Avoid using such tapes or remove such labels from the cassette before attempting use.

Changing Program

Press the button ① to change the side of tape from A to B or vice versa.

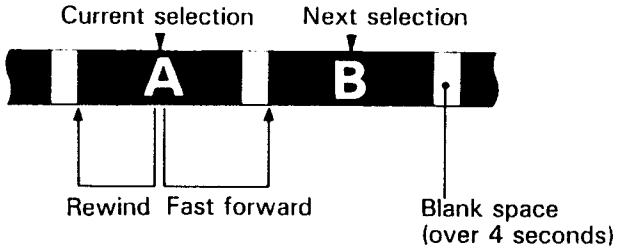
Using Fast Forward and Rewind

1. To fast-forward tape, press the (+) side of the button ②.

To rewind tape, press the (−) side.

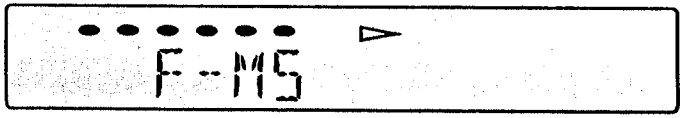
2. To release the fast forward or rewind function, press the button ①.

Using Music Search



1. To repeat the current selection (A), press the (−) side of the button ② two consecutive times.

To hear the following piece of music (B) rather than continue the current selection, press the (+) side of the button ② two consecutive times. Pressing the button ② three consecutive times makes the normal sequence of playing resume.



2. To release the music search function, press the button ①.

The following errors will cause the music search function to operate improperly, even though the unit is not malfunctioning.

- Unrecorded blank portion between selection is less than 4 seconds → the blank portion cannot be detected by the unit.
- Pauses in recorded conversations are longer than 4 seconds → the unit reads these as blanks between selections.
- Portions are recorded at very low volume for more than 4 seconds → the unit reads these as blanks between selections.

Using Radio Intercept and CD Intercept

CD intercept function activates only when connected with a separately sold multiplay CD player. (CDX-M50 etc.) The mode does not change to CD intercept mode (CD.INT ⑲ appears) if the multiplay CD player is not connected.
The mode changes as follows each time button ⑨ is pressed:
Radio intercept (R. INT ⑲ appears) → CD intercept (CD. INT ⑲ appears) → Release (⑲ disappears)

Radio intercept

Lets you listen to the radio during fast forward or rewind.

1. Press button ⑨ to go to the radio intercept mode (R. INT ⑲ appears). The unit switches to the radio during fast forward or rewind.
2. To release radio intercept, press button ⑨ to erase the ⑲ display.

CD intercept

Lets you listen to the CD during fast forward or rewind.

1. Press button ⑨ to go to the CD intercept mode (CD. INT ⑲ appears). The unit switches to the CD during fast forward or rewind.
2. To release CD intercept, press button ⑨ to erase the ⑲ display.

Using the Music Scan Function

Plays approximately the first ten seconds of each selection to help you search for the desired selection.

1. Press button ③ and frame ⑮ will light. The unit will play approximately the first ten seconds of each selection in succession.
2. To release the music scan function, press button ③ again or press button ①.

Using the Music Repeat Function

Lets you listen to the same selection repeatedly.

1. When you want to listen to the same selection repeatedly, press button ⑤ and frame ⑰ will light.
2. To release the music repeat function, press button ⑤ again or press button ①.

Using the blank skip function

Automatically carriers out fast forward to the start of the next selection when there is a blank area of 10 seconds or more between selections.

1. Press button ⑥ and frame ⑱ will light. The unit will now carry out fast forward to the start of the next selection when there is a blank area of 10 seconds or more between selections.
2. To release the blank skip function, press button ⑥ again.

Dolby B and C NR (KEH-M9300RDS)

Press button ④ to listen to a cassette recorded using the Dolby NR system. Each press of button ④ shifts the Dolby NR mode as follows:

Dolby B NR (DOLBY NR ⑯ appears) → Dolby C NR (DOLBY NR C ⑯ appears) → Dolby NR off.

Dolby B NR (KEH-M8300RDS)

Press button ④ to listen to a cassette recorded using the Dolby NR system. Each press of button ④ shifts the Dolby NR mode a follows:

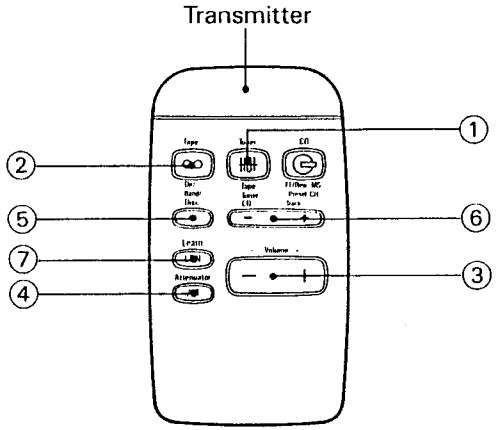
Dolby B NR (DOLBY NR ⑯ appears) → Dolby NR off.

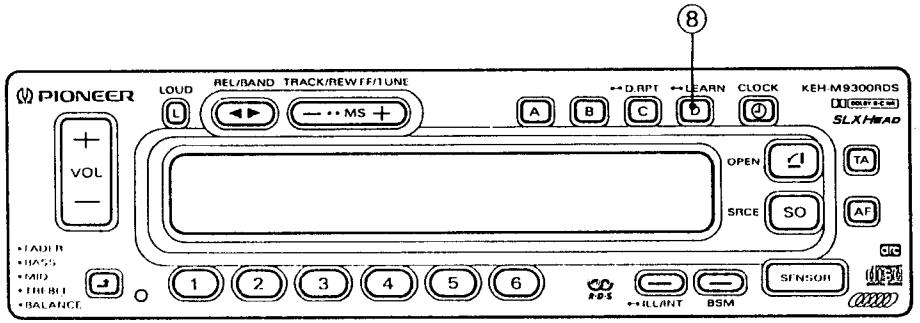
Auto Tape Selector

When a cassette tape is inserted, the automatic tape selector determines the tape type, and switches between 70 μs and 120 μs equalization. When it is a metal or chrome tape, MTL ⑭ comes on. When it is a normal tape, nothing comes on.

Using the Remote Control

- A remote control equipment does not come with KEH-M8300RDS. Use a CD-R52 available in the market if needed.





KEH-M9300RDS

① **Tuner**
The tuner is selected. Pressing again turns off the power.

② **Tape**
If this button is pressed while there is a cassette tape inserted in the equipment, the unit will switch to tape-playing. Press it again to turn the unit OFF.

③ **Volume**
Press the (+) side to increase volume and the (−) side to decrease volume.

④ **Attenuator**
Press to reduce the volume to 1/10 of its current setting.
Pressing again returns the volume to its original level.
- This function is available using the remote controller unit only.

Operating Radio

⑤ **Band**
Band changes.

F1 → F2 → F3 → M/L
(FM1) (FM2) (FM3) (MW/LW)

⑥ **Preset Channel**
Press to tune the frequencies assigned to the preset button memory. Pressing the (+) side tunes in the next high preset button number, while (−) tunes in the next lower preset button number. The preset number changes at high speed when you hold either side of this button down.

Operating Tape

⑤ **Program**
Press this button to change the side of tape from A to B or vice versa.

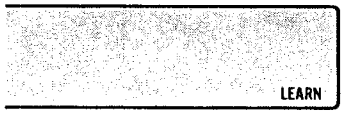
⑥ **Fast Forward/Rewind**
Press the (+) side for fast forward and the (−) to rewind the tape. Press this button twice to perform the music search operation, and a third time to return to normal playback.

⑦ **Learn Button**
Takes on the function of the button operation recorded with the learning funtion. Refer to the "Learning Function" section for details.

Learning Function

Records one button from the main unit on the remote control's learn button. This can be convenient when a button which is used often is recorded.

1. Press button ⑧ on the main unit for about 2 seconds, until a beep is emitted. "LEARN" will flash on the display.



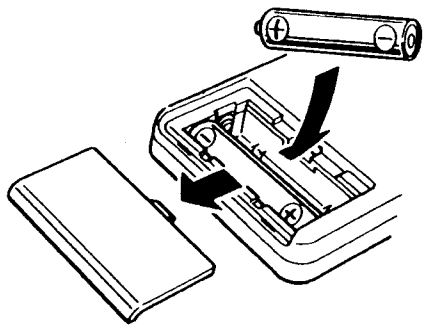
2. Press the button on the main unit that you want to use on the remote control.
3. Press the learn button ⑦ on the remote controller unit. The main unit button recorded can now be used from the remote control.

- Perform button recording while "LEARN" is flashing. If about 5 seconds pass without a button being recorded, the "LEARN" stops to flash, and the previously recorded button will remain in memory.

Preparing to Use the Remote Controller Unit

Loading Batteries

1. Remove the battery compartment cover from the remote controller unit.
2. Load two batteries, whose type is UM-4, AAA, or R03, as applicable, that come with the unit into the remote controller unit, ensuring that their polarity (+/−) is correct.
3. Replace the battery compartment cover.

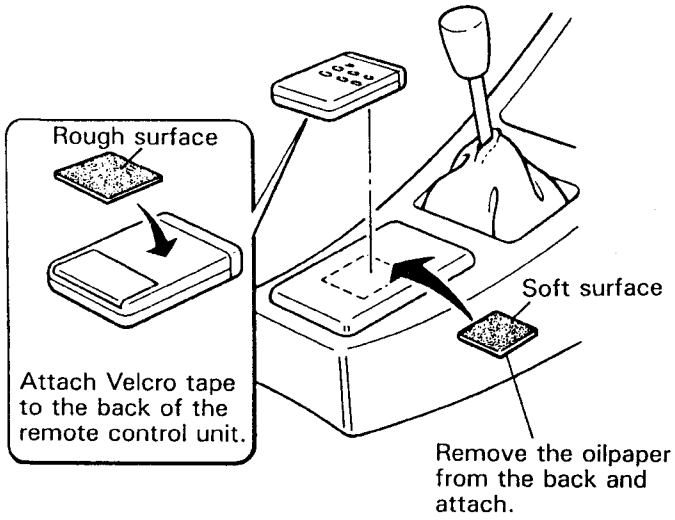


Precautions When Loading Batteries

Note the following precautions when loading batteries into the remote controller unit to avoid damage due to battery fluid leakage.

- Always check carefully that you are loading batteries with their ⊕ and ⊖ poles facing in the proper directions.
- Never mix old and new batteries. Always replace batteries with two new ones.
- Some batteries may appear to be identical but have different voltage ratings. Never mix battery types.
- Some batteries can be recharged and some cannot. Be sure to carefully read the label for the batteries you use.
- To avoid damage to the remote controller caused by battery leakage, remove the batteries from the remote controller if you do not plan to use it for more than one month. If you find that fluid has leaked, thoroughly wipe out the battery compartment and load a set of new batteries.

Installing the Remote Controller Unit


Rough surface
Soft surface
Attach Velcro tape to the back of the remote control unit.
Remove the oilpaper from the back and attach.

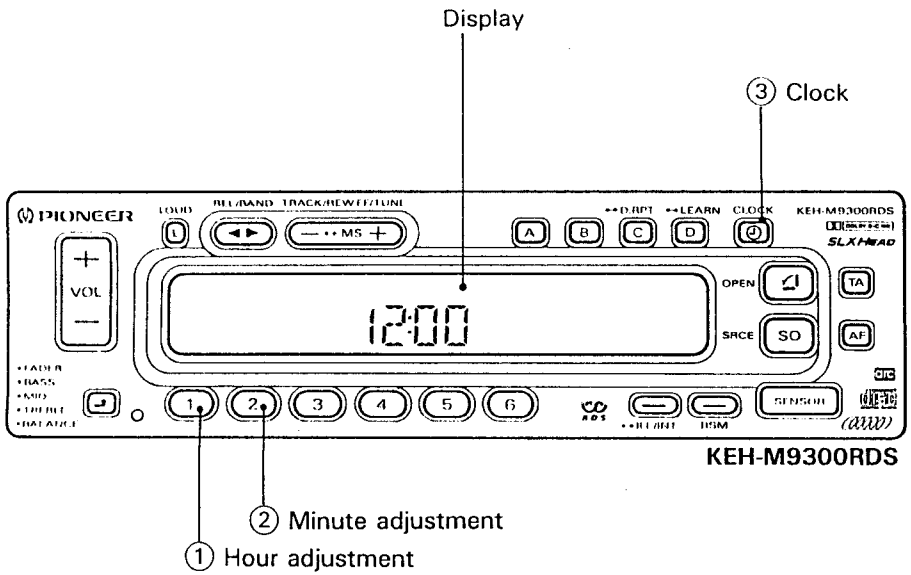
Affix a strip of Velcro tape to the back of the remote control unit. Remove the oil paper on the back and affix into place.

- Thoroughly wipe off the surface before affixing the Velcro tape.

Precautions

- Keep the remote controller unit in an area not exposed to long periods of direct sunlight.
- The remote controller unit may not operate properly if the transmitter of the remote controller unit is pointed towards the floor or the seat of the vehicle.
- Since the transmitter employs and infrared system, it may not operate properly while car stereo unit is exposed to direct sunlight. In such a case, block the sunlight from the sensor and then perform the desired operation.
- If the remote controller fails to operate unless it is brought close to the unit, it may indicate that battery power is low. Replace the batteries in the remote controller.

Using the Clock Display



Displaying the Time

The clock is displayed while button ③ is depressed.
Press button ③ again to turn off the clock display.
The clock display cannot be used if the power for the cassette tape and radio is not ON.

Adjusting the Time

Adjusting the Hours

While holding down button ③, press button ① to adjust the hour setting of the clock. Each press of button ① advances the hour setting by one hour, and holding it down advances the setting at high speed.

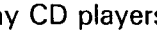
Adjusting the Minutes

While holding down button ③, press button ② to adjust the minute setting of the clock. Each press of button ② advances the minute setting by one minute, and holding it down advances the setting at high speed.

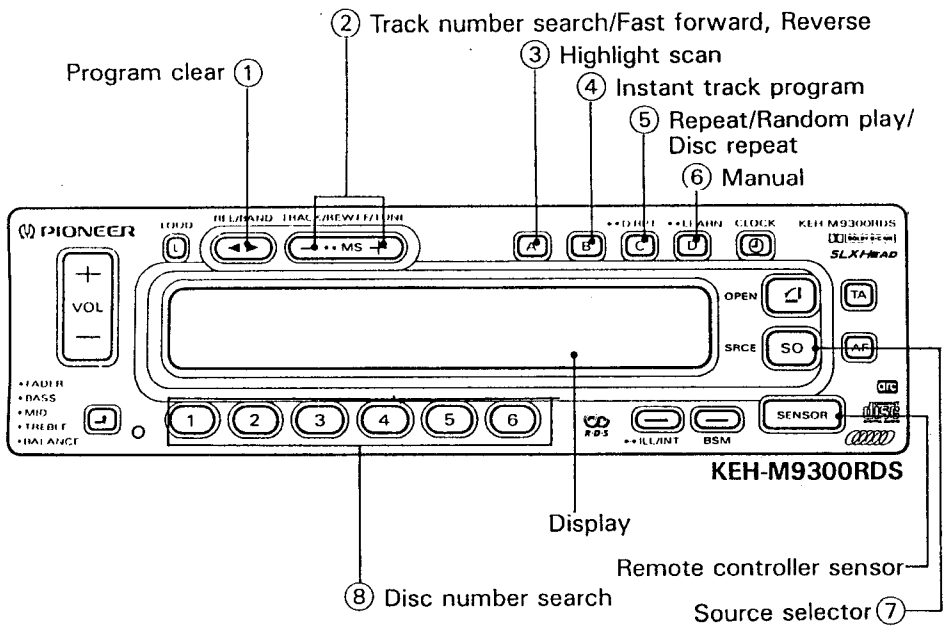
- When the clock display is ON, pressing other buttons will release the clock display. The display will be restored approximately 25 seconds after the button operation has been completed.

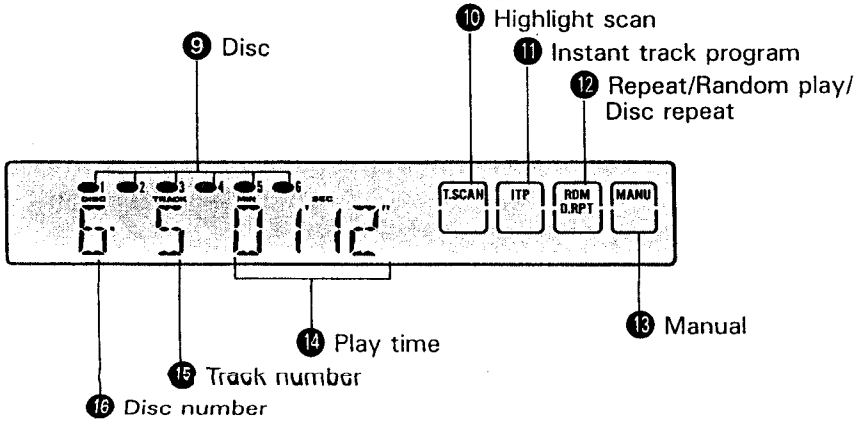
Precautions When Using the Multi-Play CD Control

- This model can be used as controller when an optionally available multi-play CD player (e.g., CDX-M50) is included in the system. Programmed play does not operate when used with the multi-CD player CDX-M70 or CDX-M100.
- See pages 23 through 28 for details on operation procedures.
- The Owner's Manual for the multi-play CD player does not contain an explanation of the CD controls for this unit. Read this Owner's Manual for details on proper operation and keep it handy for later reference.
- Immediately after the multi-play CD player is connected to the system, it may not operate properly (i.e. the system will not enter the multi-play CD player mode when you press the source selector button). In this case, press the clear button of the main unit and the clear button of the multi-play CD player, and attempt operation again.
- An **ERROR** (error) indicator is shown on the display and operation of the system becomes impossible when there are no discs in the magazine or when the discs are loaded into the magazine with their labels facing upwards. Whenever this message appears, remove the disc magazine and check the discs.
- The indicator **HHHH** flashes on the display and playback is automatically cut when the temperature around the multi-play CD player becomes too high. This protects the laser mechanism from serious damage. Listen to the radio until the temperature returns to normal. (This functions only when your unit is used with a Multi-Play CD player CDX-M100.)

The Magazine Type Multi-Play CD players with  mark and the Magazines with the same mark are compatible for 5-inch (12 cm) discs.

Playing Compact Discs





1 Press button ⑦ repeatedly until the unit goes to the multi-play CD mode. Disc number ⑯, track number ⑮ and play time ⑭ will light. For details, see the section on Source Selector on page 6.

2 Select a disc using disc number search.
Use the buttons ⑧ to select the desired disc. The number of the selected disc will be displayed in the display ⑯.

- Display ⑨ indicates whether the magazine is loaded or empty.
- If there is a tray without a disc in the magazine, that tray number will not be selected even if its button is pushed.

3 Adjust the volume and tone. (Refer to page 6.)

4 To conclude play, press button ⑦ repeatedly until the power goes OFF.
To resume play, press button ⑦ again. For details, see the section on Source Selector on page 6.

- When the multi play CD player (CDX-M100) is installed, if playback is stopped and then restarted, it will resume play at the beginning of the track that was stopped.

Note:

- After you press a Button in Bank ⑧, it may take some time before play begins due to the time necessary to load and set the disc in the mechanism.
- When a disc in which there are several seconds between tracks is ued, the amount of elapsed disc-play time is shown, for example, as −01 and −00.

Track Number Search

The desired track on the disc currently being played can be selected by track (or song) number.

1. Make sure that the frame of the manual indicator ⓭ is not illuminated. If it is illuminated press button ⑥ to turn it off.
2. Use the button ② to select a track. Pressing the (+) side increases the track number ⓯, and pressing the (−) side decreases it. Holding the button down continuously increases or decreases the track number.

Using Highlight Scan

Highlight Scan is designed to enable you to conveniently scan all pieces of music contained in the disc by playing 10 seconds each at your designated point of time after the start of the music. The starting time of play is set at one minute in factory. Therefore, the highlight Scan begins one minute after the start unless you designate it otherwise.

When you do not want to change the factory-set time:

- When used in conjunction with the old type multi play CD players [CDX-M70] or [CDX-M100], the place where playback starts in highlight scan is fixed as the start of each track. Also, it is not possible to adjust this time setting.

1. Pressing Button ③ turns on the frame of Highlight Scan ⓾.
2. The contained pieces of music will be played in sequence for 10 seconds each one minute after the beginning.
3. Press Button ③ again when your selected piece comes, and it will continue to play. At this point, the Highlight Scan discontinues to operate.

- The previous function automatically resumes when a piece of music with which Highlight Scan began returns.

Changing the Starting Time of Highlight Scan

When you want to set the starting time of the Highlight Scan to 30 seconds:

1. Turn of frame illumination on the manual indicator ⓭ by pressing the button ⑥.
2. Keep pressing either (+) or (−) side of Button ② until the numerals reaches 30.
3. Pressing Button ③ for two or more seconds, turns on the frame of Highlight Scan ⓾.
   Highlight Scan will begin 30 seconds after the start of the next piece of music.

- The starting time of Highlight Scan can be designated at ten or tens of seconds only. A tenth or tenths of seconds can be disregarded.
- If a piece of music ends before your designated point of time at which Highlight Scan starts, the scanning is performed for its beginning 10 seconds.
- If a piece of music lasts less than 10 seconds, so does the Highlight Scan.
- You may wish to change the starting time longer without suspending the function. You may do so, however, only to a relatively long-playing piece of music because, as a matter of cource, the time cannot be set so as to come after the end of the music.

Using the Music Repeat and Random Play Modes

Press button ⑤ to switch to Music Repeat and Random Play. Display ⓬ will change as follows each time the button is pressed:

Music Repeat→Random Play→Release

Using Music Repeat

This function lets you listen to a track as many times as you wish.

1. During playback of a favorite track, pressing button ⑤ selects music repeat mode and repeats the track indefinitely.

2. To clear the music repeat state, press the button ⑤ (The frame illumination ⑫ will go out).
- When Music Repeat is not operational, the compact discs contained in the magazine will play sequentially from beginning to end, and then start from disc 1 again.

Random Play

This is a playback mode in which the built-in microcomputer selects the track number in random order, and it allows music to be enjoyed with a new sensation.

1. Press button ⑤ and select random play mode. When the current track is over, future tracks will be selected randomly.
2. To clear random play, press button ⑤. (The frame illumination ⑫ will go out.)
- Since selections are played in random order, the same selection may be played twice in succession.
- With the multi play CD player, any track from any discs in the magazine may be selected. However, if and old type multi play CD player is used (CDX-M100), random play will only select tracks from a single disc.

Using the Disc Repeat Function

When you wish to listen repeatedly to the same single disc in the magazine.

1. Press button ⑤ for at least 2 seconds. The ⑫ display will appear as follows:

2. To release the disc repeat function, press button ⑤ again for at least 2 seconds.

Using Fast Forward and Reverse

1. Turn on manual frame ⑬ illumination by pressing button number ⑥.
2. Press the (+) side of button ② for fast forward, and the (−) side for reverse.
- Sound is output during fast forward and reverse operations.

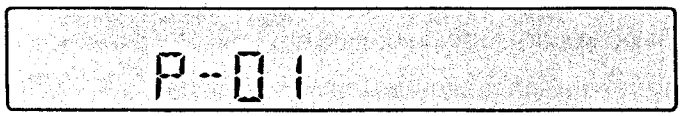
Using Program Play

This function lets you program the play sequence of all of the tracks contained on the compact discs loaded in the magazine.

- The ITP function will not operate when connected to either the CDX-M70 or CDX-M100.
- Up to 32 selections can be programmed for a single magazine.
- Up to 16 different magazines (max. 32 selections per magazine) can be programmed individually. If you program more than 16 magazines, old programs are automatically replaced by new ones.
- Automatic Magazine Program Selection (AMPS) retrieves the right program from the memory automatically, as soon as a preprogrammed magazine is loaded. Preprogrammed magazines are identified using the CD in the tray 1 of the magazine. Therefore be sure that tray 1 contains a disc.

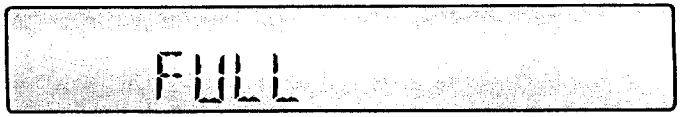
Programming

1. While a disc is playing, select the desired disc and track you want to program. (See page 23-24)
2. Press the ITP button ④ memorize the track being played.



Displays the number of the step being added to the memory

3. Procedures 1 and 2 above can be repeated until a maximum of 32 steps are programmed.
- If the 33rd step is selected, the "**FULL**" display will appear, indicating that no more selections can be programmed.



- ITP memory is not possible during music repeat or random play.
- When there are already a number of selections in the memory, the new selection will be added to the last step.

Playing back the program

1. If the ITP button ④ is pressed for about 2 seconds during normal playback, then program playback will start. (The ITP frame ⓫ will light.)

Displays the step number being played.

2. Press the ITP button ④ again to cancel program play.
- Pressing button ② during programmed play makes it possible to search for a specific step number from among the programmed selections.
- Program play returns to the first step in the programmed sequence when it reaches the end of the program.
- When playing a magazine that has no program recorded, "**EMPTY**" will be displayed for approximately 3 seconds.

Erasing the program

It is possible to erase one or all selections of magazine being played.

To erase a single selection:

1. Press button ② during programmed play, and search for the specific step you wish to erase.
2. Press the Program Clear button ① for at least 2 seconds and the selection being played will be erased.

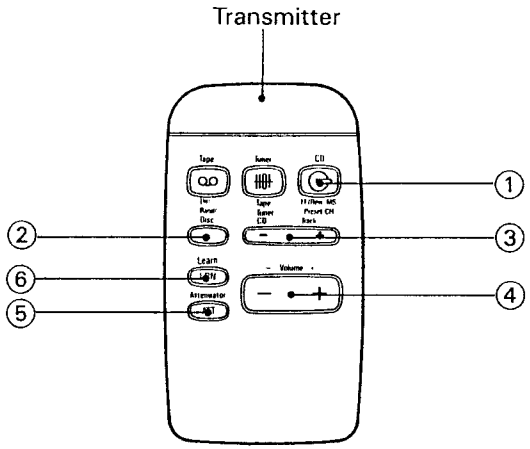
- After the particular track has been erased, the tracks in the next position move from down up one notch in the order from the previous position.

To erase the entire program:

While a disc is playing, hold down button ① for at least 2 seconds. All the programs in the magazine being played will be erased.

Playing Disc by Remote Control

- A remote control equipment does not come with KEH-M8300RDS. Use a CD-R52 available in the market if needed.



① CD
Unit goes to CD play. Press again to turn OFF.

② Disc Number Search
Used to specify the number a disc loaded in the magazine. Each press of this button sequentially advances the number.

③ Track Number Search
Press to search for a selection (track number) on the current disc. Press the (+) side to increase the track number on the display, and the (−) side to reduce the track number. Holding down either side of this button changes the track number at high speed.

④ Volume
Press the (+) side to increase volume and the (−) side to decrease volume.

⑤ Attenuator
Press to reduce the volume to 1/10 of its current setting. Pressing again returns the volume to its original level.
- This function is available using the remote controller unit only.

⑥ Learn Button
Takes on the same function as the button recorded with the learn function. Refer to the section "Learning Function" on page 19 for details.

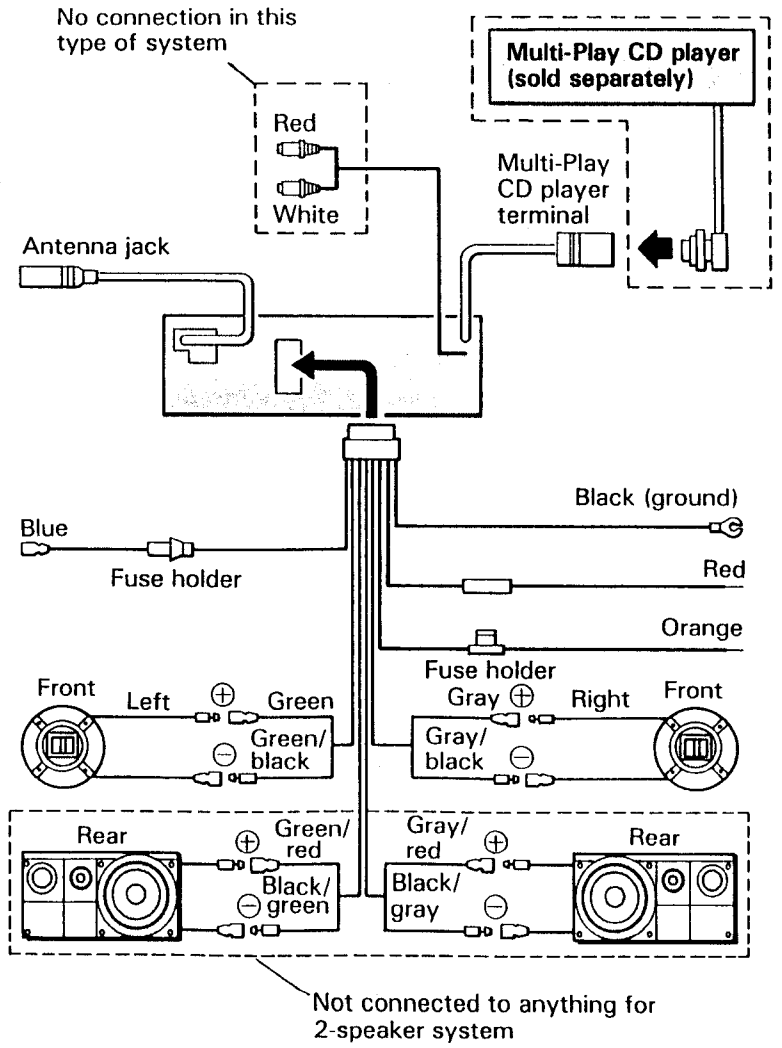
Connections

Note:

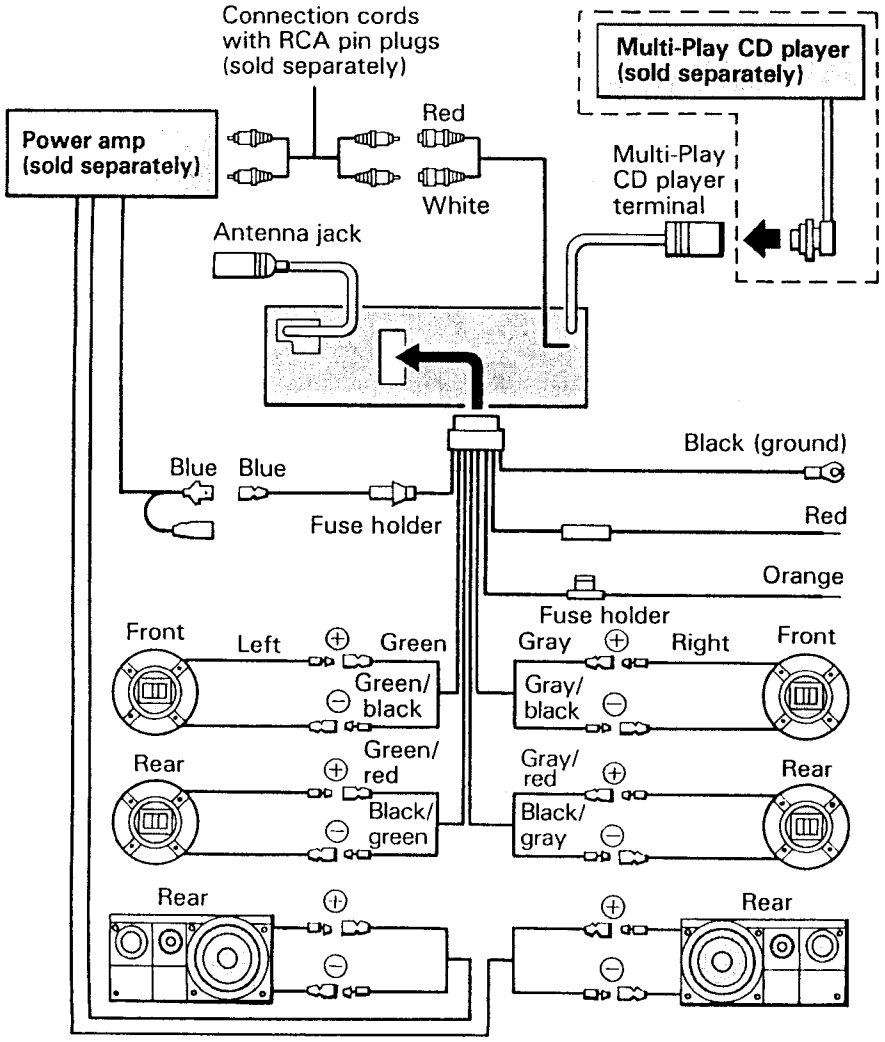
- To avoid shorts in the electrical system, be sure to disconnect the battery ⊖ cable before beginning installation.
- Be sure to properly connect the color coded leads. Failure to do so can cause malfunctions.
- Be sure to connect the grounding lead to a metal part, such as the chassis of the car. If the lead is not connected properly, this unit will not operate at all.
- Since a unique BPTL circuit is employed, never wire so the speaker leads are directly grounded or the left and right speaker ⊖ leads are common.
- Refer to the owner's manual for details on connecting the various cords of the power amp and other units, then make connections correctly.
- Speakers connected to this unit must be high-power type possessing maximum input of at least 25 W and impedance of 4 to 8 ohms. Connecting speakers with output and/or impedance values other than those noted here can damage the speakers.
- When the power amp is being linked with this system, be sure not to connect the blue lead to the amp's power terminal. Likewise, when linking this system with the auto-antenna, do not connect to power terminal for the antenna. Such connection can make overcurrent cause malfunctions.
- Be sure that the antenna cord and speaker cord are apart as far as possible from each other in order to prevent noise interruption. When this unit is connected to an optionally available Multi-Play CD player, such as CDX-M50, the connecting cord must also be as distant as possible from the antenna cord for the same purpose.

Blue	If this unit is combined with a power amp, connect its blue lead to the blue lead (system control terminal) of the power amp. If combined with an auto-antenna, connect its blue lead to the relay control terminal of the auto-antenna. (MAX. 300 mA, 12 V DC)
Orange	To terminal always supplied with power regardless of ignition switch position.
Red	To electric terminal controlled by ignition switch (12 V DC) ON/OFF.
Black (ground)	To vehicle (metal) body.

2/4-speaker system



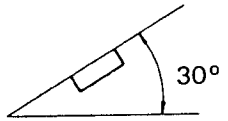
6-speaker system



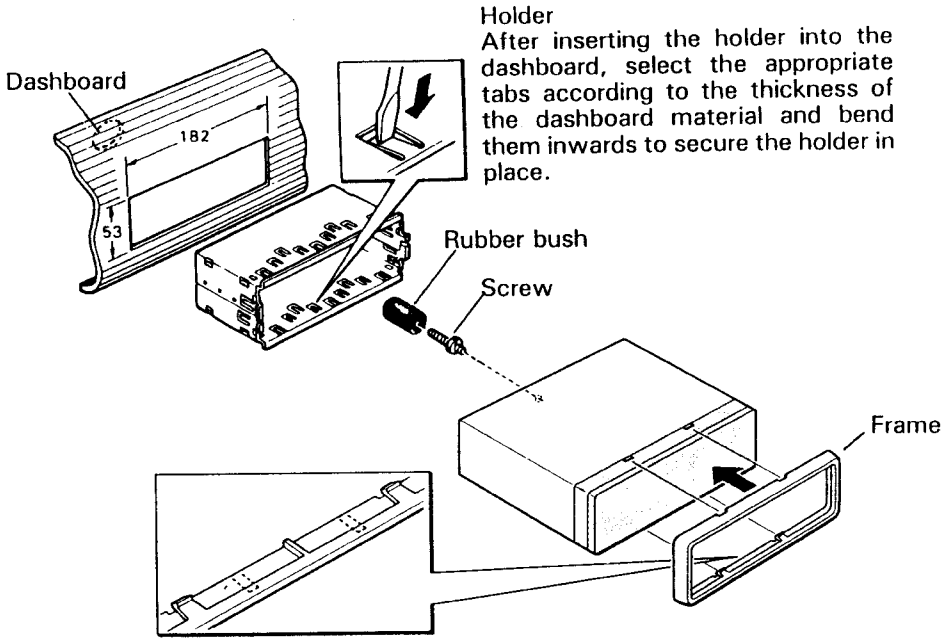
Installation

Note:

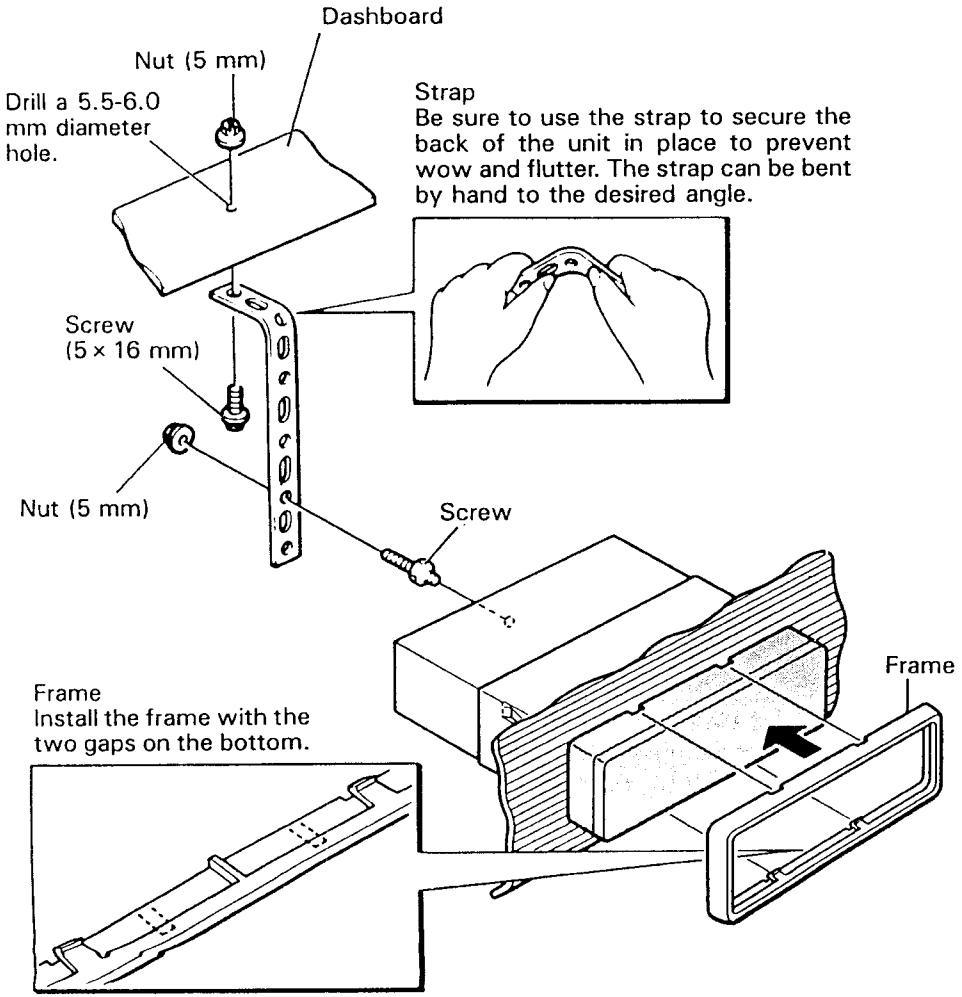
- Use only the parts included with the unit to ensure proper installation. The use of unauthorized parts can cause malfunctions.
- Consult with your nearest dealer if installation requires the drilling of holes or other modifications of the vehicle.
- Do not use the front panel as a way of gripping the unit during installation and wiring. The front panel may come away and the unit may drop on the floor.
- If installation angle exceeds 30° from horizontal, the unit might not give its optimum performance.



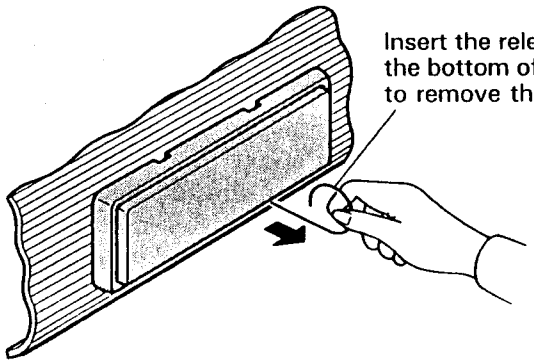
Installation with the rubber bush


Dashboard
182
53
Holder
After inserting the holder into the dashboard, select the appropriate tabs according to the thickness of the dashboard material and bend them inwards to secure the holder in place.
Rubber bush
Screw
Frame
Frame
Install the frame with the two gaps on the bottom.

Installation without the rubber bush

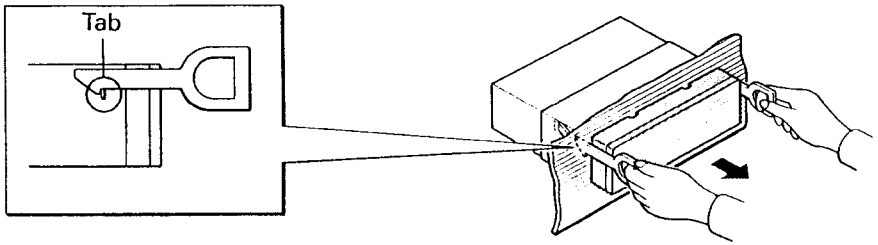

Dashboard
Nut (5 mm)
Drill a 5.5-6.0 mm diameter hole.
Strap
Be sure to use the strap to secure the back of the unit in place to prevent wow and flutter. The strap can be bent by hand to the desired angle.
Screw (5 x 16 mm)
Nut (5 mm)
Screw
Frame
Frame
Install the frame with the two gaps on the bottom.

Removing the unit



Insert the release pin into the hole in the bottom of the frame and pull out to remove the frame.

Insert the tab of the lever till it catches onto the metal fixture of the unit.
(Point the tab of the lever downward.)
To remove the unit, push the lever downwards while pulling it towards you.

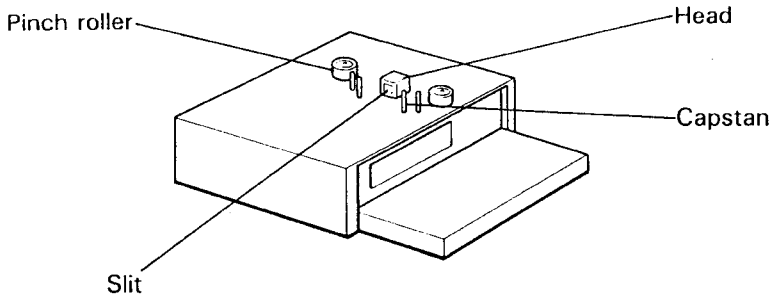


Head Cleaning

The playback head performs an important role in the reproduction of recordings. If the head should become dirty, tone quality suffers and skipping will occur. Therefore, the head should be cleaned periodically (once or twice a month).
If a cotton swab is used, dip the swab into absolute alcohol or head cleaning fluid and use it to scrub the slit in the tape head.

Head Position

The head is located on the right side of the tape slot, approximately halfway between the front of the unit and the back.



Note:

- Don't use metal or a magnet on the head. Never use tweezers or pliers wrapped with cotton or gauze. This can scratch the head.
- When using a cleaning tape, play it once on one side for normal cleaning. Too much use of the cleaning tape will increase head wear. Be sure to read the cleaning tape instructions before use.

Precautions

- To assure proper operation of the unit, keep the vehicle interior temperature within a normal range using the vehicle's air conditioner or heater.
- When replacing fuses, be sure to use only fuses of the capacity prescribed on the fuse holder.
- If the tape has been unevenly wound, the force required for tape transport is too high which will cause play to switch automatically to the other side of the tape (the unit senses that the tape has reached the end). When this happens, use fast forward to rewind the tape uniformly before attempting playback.
- Don't use tapes that are longer than C-90 (90 minutes). C-120 (120 minutes) tape is very thin and can stretch and cause poor operation.
- Don't leave tapes in direct sunlight because they can get too hot and deform.
- Don't put tapes near magnets. Magnets can erase parts of tapes.
- Be sure to store tapes properly when not in use. Rewind them evenly and put them into a cassette case.
- Do not add any oil to the rotating parts nor disassemble the set if it does not perform satisfactorily.
- Frequencies and times stored in memory can be lost when the vehicle's battery is replaced. If this should occur, reprogram the preset memory.
- When driving your vehicle, be sure to keep the volume of the unit set low enough to allow you to hear sounds coming from outside.

In case of trouble
When the unit does not operate properly, contact your dealer or the nearest authorized PIONEER Service Station.

Specifications

General

Power source ..... 14.4 V DC (10.8 — 15.6 V allowable)
Grounding system ..... Negative type
Max. current consumption ..... 8.0 A
Dimensions (chassis) ..... 180 (W) × 50 (H) × 155 (D) mm
(front face) ..... 188 (W) × 58 (H) × 18 (D) mm
Weight ..... 1.8 kg

Amplifier

Maximum power output ..... 25 W × 4 (EIAJ)
Continuous power output ..... 13 W × 4
(1% dist. at 1 kHz)
Load impedance ..... 4Ω (4 – 8Ω allowable)
Tone controls (bass) ..... ± 10 dB (100 Hz)
(middle) ..... ± 10 dB (1 kHz)
(treble) ..... ± 10 dB (10 kHz)
Loudness contour ..... + 12 dB (100 Hz), + 7 dB (10 kHz)
(volume: – 30 dB)
Nominal output level/
output impendance (pre out) ..... 500 mV/1 kΩ

Tape player (KEH-M9300RDS)

Tape ..... Compact cassette tape (C-30 — C-90)
Tape speed ..... 4.8 cm/sec.
Fast forward/rewind time ..... Approx. 100 sec. for C-60
Wow & flutter ..... 0.08% (WRMS)
Frequency response ..... Metal: 30 — 22,000 Hz (± 3 dB)
Stereo separation ..... 45 dB
Signal-to-noise ratio
..... Metal: Dolby C NR IN: 71 dB (IEC-A network)
Dolby B NR IN: 65 dB (IEC-A network)
Dolby NR OUT: 57 dB (IEC-A network)

Tape player (KEH-M8300RDS)

Tape ..... Compact cassette tape (C-30 – C-90)
Tape speed ..... 4.8 cm/sec.
Fast forward/rewind time ..... Approx. 100 sec. for C-60
Wow & flutter ..... 0.08% (WRMS)
Frequency response ..... Metal: 30 – 19,000 Hz (± 3 dB)
Stereo separation ..... 45 dB
Signal-to-noise ratio
..... Metal: Dolby B NR IN: 65 dB (IEC-A network)
Dolby NR OUT: 57 dB (IEC-A network)

FM-Tuner

Frequency range ..... 87.5 — 108 MHz
Usable sensitivity ..... 8 dBf (0.7 μV/75 Ω, mono)
50 dB quieting sensitivity ..... 13 dBf (1.2 μV/75 Ω, mono)
Signal-to-noise ratio ..... 70 dB (IEC-A network)
Distortion ..... 0.3% (at 65 dBf, 1 kHz, stereo)
Frequency response ..... 30 — 15,000 Hz (± 3 dB)
Stereo separation ..... 40 dB (at 65 dBf, 1 kHz)

MW-Tuner

Frequency range ..... 531 — 1,602 kHz
Usable sensitivity ..... 18 μV (25 dB) (S/N: 20 dB)
Selectivity ..... 50 dB (± 9 kHz)

LW-Tuner

Frequency range ..... 153 — 281 kHz
Usable sensitivity ..... 30 μV (30 dB) (S/N: 20 dB)
Selectivity ..... 50 dB (± 9 kHz)

Note:

Specifications and the design are subject to possible modification without notice due to improvements.